

# Work Order ID 60236

Tuesday, June 29, 2010 11:47:50 AM

Page 1

Item ID: D3564-9

Revision ID:




Item Name: Wearshoe

Start Date: 6/29/2010 Start Qty: 12.00

Required Date: 7/6/2010 Req'd Qty: 12.00

Reference:

Approvals: Process Plan:   *PL*   Date: 10/6/29 Tooling:            Date:             
QC:   1   Date:            SPC (Y/N):            Date:           

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3564	Rev D								
100	FLOW WATER JET	0.00							
									
Waterjet		0.00							
FLOW CNC Waterjet									
304 . 063									
	Memo								
	1-Cut as per Dwg D3564 ***** (D3564-1F) ***** <input checked="" type="checkbox"/> Dwg Rev: <u>D</u> <input type="checkbox"/> Prog								
	Rev: <u>D</u> <input type="checkbox"/> 2-Deburr if necessary								
			<i>SD</i>	<i>10/07/12</i>					
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
									
QC		0.00							
Quality Control	Memo								
120	QC8- Inspect parts - second check	0.00							
									
QC		0.00							
Quality Control	Memo								

*B10-7-1*

*(13)*

*B10-7-1*

*(13)*

*8/10/07/12*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 60236

Tuesday, June 29, 2010 11:47:50 AM

Page 2

Item ID: D3564-9

Revision ID:

Item Name: Wearshoe

Start Date: 6/29/2010 Start Qty: 12.00

Required Date: 7/6/2010 Req'd Qty: 12.00

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 Barcode Brake NC Brake NC	NC BRAKE  Memo Deburr if necessary <input type="checkbox"/> Form on Brake as per Dwg D3564 using Jigs DT 8129 and DT 8155 <input type="checkbox"/> Form Joggle as per Dwg D3564 on brake using Jig DT 8157	0.00  0.00							
140 Barcode QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo Ensure joggle as per dwg D3429	0.00  0.00							
150 Barcode Large Fab Large Fab	Large Fab  Memo Qty Description Batch <input type="checkbox"/> A/R 2059B Hardcoat 114705 <input type="checkbox"/> Weld hardcoat as per Dwg D3564	0.00  0.00							

8/10/07/12

8/10/07/12

(13)

PL 10.07.20

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_






NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			




**NOTE:** Date & initial all entries

# Work Order ID 60236

Tuesday, June 29, 2010 11:47:50 AM

Page 3

Item ID: D3564-9	Accept		Setup	Start	
Revision ID:				Stop	
Item Name: Wearshoe					
Start Date: 6/29/2010	Start Qty: 12.00		Cust Item ID:		
Required Date: 7/6/2010	Req'd Qty: 12.00		Customer:		
Reference:					
Approvals:	Process Plan:	Date:	Tooling:	Date:	
	QC:	Date:	SPC (Y/N):	Date:	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160  QC Quality Control	QC10- Inspect visual per QSI004- ground welds  Memo	0.00 0.00							
170  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00							
180  Powdercoat Powder Coating	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 M 112588 Memo START TIME: 2:45 3:00 FINISH TIME: 3:15	0.00 0.00							

(X13)

13 BR 10-7-22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 60236

Tuesday, June 29, 2010 11:47:50 AM

Page 4

Item ID: D3564-9

Accept

Setup Start

Revision ID:

Stop

Item Name: Wearshoe

Start Date: 6/29/2010 Start Qty: 12.00

Cust Item ID:

Required Date: 7/6/2010 Req'd Qty: 12.00

Customer:

Reference:

Run Start

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 QC Quality Control	QC3- Inspect Part Finish  Memo	0.00  0.00				MA	10	02	22 (13)
200 Packaging Packaging	Identify as per dwg & Stock Location  Memo	0.00  0.00				13	BA	10-7-23	
210 QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00							10/07/23 MF 10-7-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Page 1

Tuesday, June 29, 2010 11:47:54 AM

Work Order ID: 60236



Parent Item: D3564-9

Parent Item Name: Wearshoe

Start Date: 6/29/2010

Required Date: 7/6/2010

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A New Issue 07-03-08 ec  
 IPP Rev:B As per Rev C 07-07-09 JLM  
 IPP Rev:C As per Rev D 07-09-09 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA 		Purchased	No			100	sf	77.2439	1.41	17.81053		18.4	
304/316 Sheet .063												1810-7-1	

Location

Loc Qty

Loc Code

MAT

77.24389474

111323

0

114799

77.2438947

114799

⑬

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order:	C0236
Description: Wearshoe		Part Number:	D3564-9
Inspection Dwg: D3564 Rev: D		Page 1 of 1	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.227	+/-0.010	3.226	*		T-M	
2.432	+/-0.010	2.435	*		u	
2.50	+/-0.030	2.500	*		u	
6.000	+/-0.010	6.000	u		u	
12.104	+/-0.010	12.104	*		u	
18.000	+/-0.010	18.00	u		u	
18.000	+/-0.010	18.00	*		u	
18.00	+/-0.030	18.00	*		u	
9.00	+/-0.030	9.00	*		u	
11.50	+/-0.030	11.50	*		u	
0.300 x 0.300	+/-0.010	302x301	*		vern	
Ø0.188	+0.005/-0.001	.190	*		vern	
R0.375	+/-0.010	.375	*		R-G	
0.063	+/-0.010	.060	*		vern	

Measured by: <u>HR</u>	Audited by: <u>S.</u>	Prototype Approval:	N/A
Date: <u>10-7-1</u>	Date: <u>10/07/12</u>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	08.01.16	New Issue	KJ/EC/DD	<u>[Signature]</u>

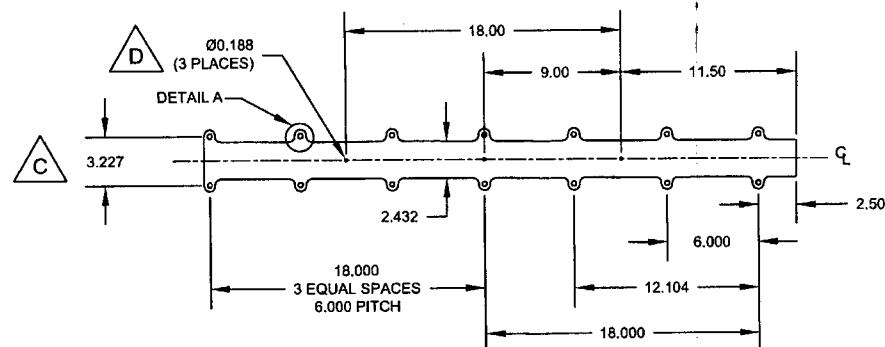
W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

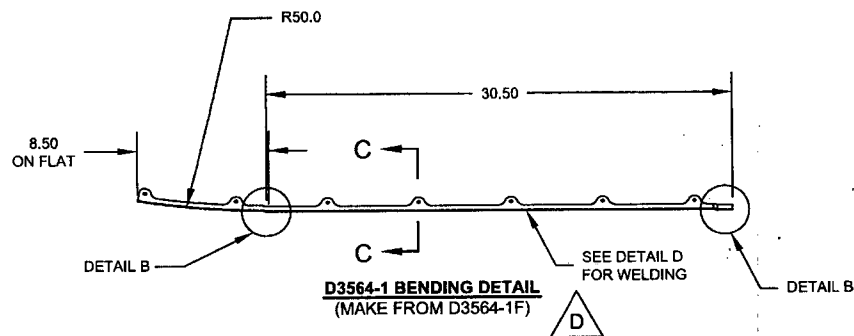
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DATE	STEP		Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
				Initial Chief Eng	Action Description Chief Eng	Sign & Date			

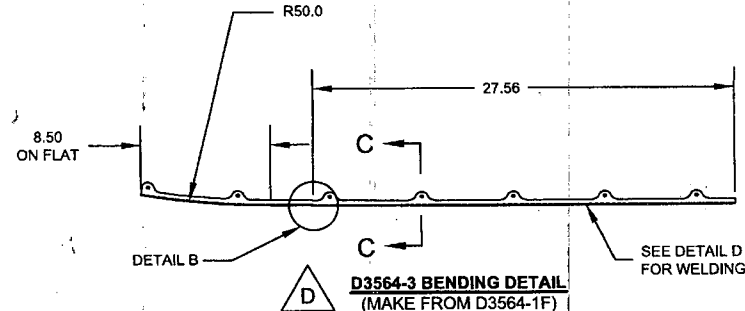
**NOTE:** Date & initial all entries



**D3564-1F FLAT PATTERN**



**D3564-1 BENDING DETAIL  
(MAKE FROM D3564-1F)**



**D3564-3 BENDING DETAIL  
(MAKE FROM D3564-1F)**

**D3564-1/-3/-5/-7/-9/-11/-13/-15 WEARPLATE NOTES:**

- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 16 GAUGE (0.063 THICK)  
(REF DART MATERIAL SPEC M304S16GA)
- 2) FINISH: POWDER COAT GREY SANDTEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: SEE TABLE IN ZONE A3
- 8) WELD PER DART QSI 004
- 9) SEE PG 3 FOR SECTIONS AND DETAILS
- 10) PARTS ARE SYMMETRIC ABOUT C

WEIGHTS:	
D3564-1	1.85 lbs
D3564-3	1.85 lbs
D3564-5	1.93 lbs
D3564-7	1.26 lbs
D3564-9	1.85 lbs
D3564-11	1.85 lbs
D3564-13	0.38 lbs
D3564-15	0.80 lbs

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *40236*

*2810-6-29*

RELEASED  
07.09.04

D	UPDATE DRAWING TEMPLATE; CHANGE ALL (TYP X PLS) TO (X PLACES); PG1 A8: UPDATE NOTES; PG1 A8, PG3 B5,C5: ADD D3564-15; PG1 B6,B3: D3564-1/-3 WAS ONE FIGURE; PG2 A7,A3: D3564-9/-11 WAS ONE FIGURE; PG2 A7,A3: D3564-9/-11 WAS ON PG1; PG3 B8,C8: D3564-13 WAS ON PG2; PG3 D2: WELDING DETAIL WAS ON PG1 PG3 A5,7,B2: RELOCATE DETAILS AND SECTION; PG3 A5,7,B2: INCREASE DETAIL AND SECTION SIZE	CB	07.08.21
C	MOVE TAB OUTBOARD, DETAIL A	PH	07.04.17
B	ADD AMS 5513 AND AMS 5524	PH	07.03.20
A	NEW ISSUE	PH	06.12.18
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD	
DRAWN	CB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. 0
MFG. APPR.	PH	D3564	SHEET 1 OF 3
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	WEARSHOE	1:8
DATE	07.08.21	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

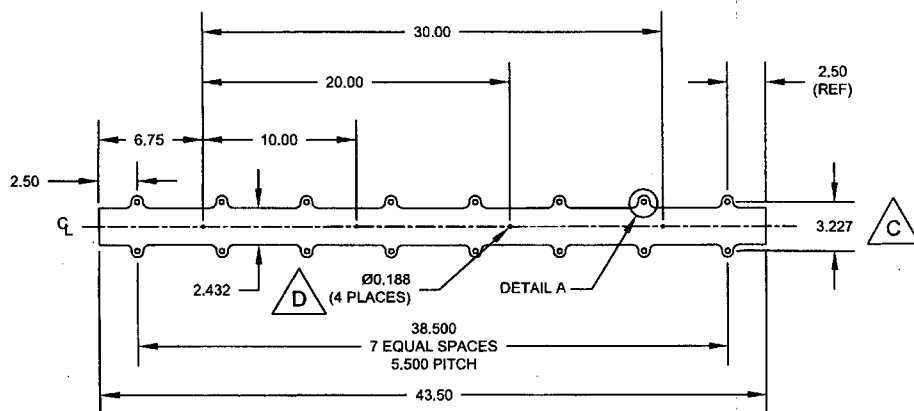
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

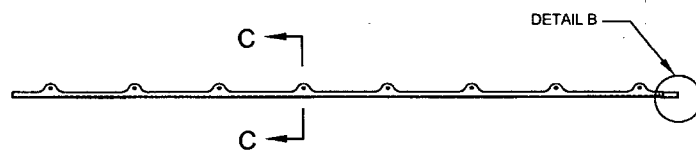
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

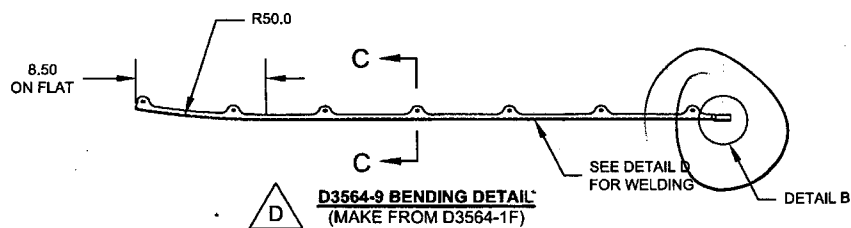
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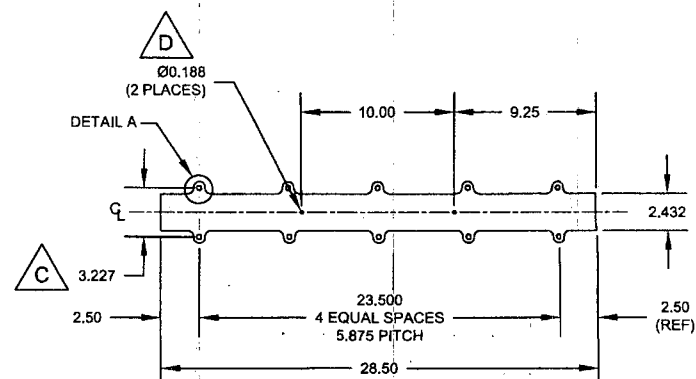
**D3564-5F FLAT PATTERN**



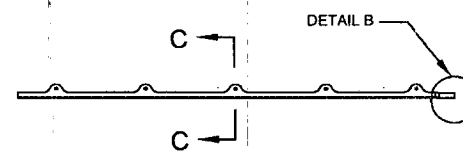
**D3564-5 BENDING DETAIL**  
(MAKE D3564-5 FROM D3564-5F)



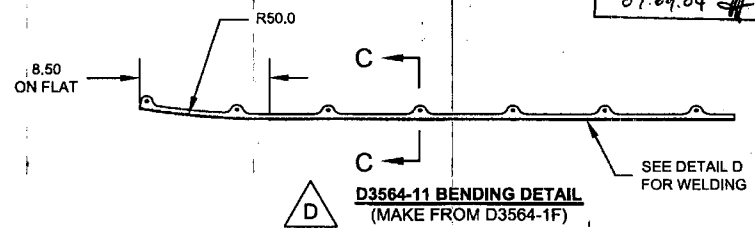
**D3564-9 BENDING DETAIL**  
(MAKE FROM D3564-1F)



**D3564-7F FLAT PATTERN**



**D3564-7 BENDING DETAIL**  
(MAKE D3564-7 FROM D3564-7F)



**D3564-11 BENDING DETAIL**  
(MAKE FROM D3564-1F)

RELEASED  
07.09.04

celo 60234

DESIGN	PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	CB		
CHECKED	PH	DRAWING NO. D3564	REV. D
MFG. APPR.	PH		SHEET 2 OF 3
APPROVED	PH	TITLE WEARSHOE	SCALE 1:8
DE APPR.	PH	COPYRIGHT © 2006 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

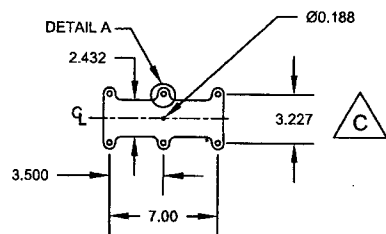
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

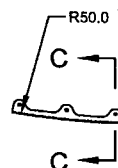
**NOTE:** Date & initial all entries



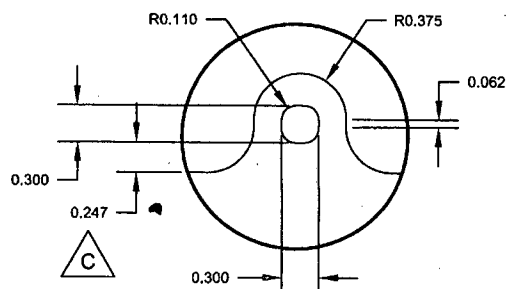
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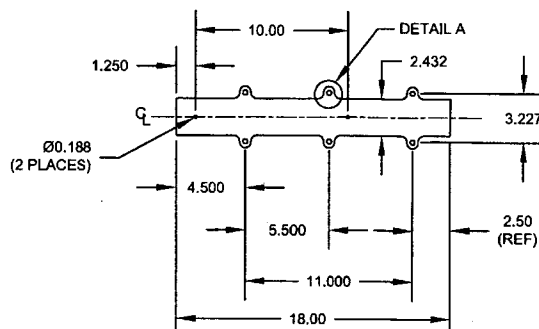
**D3564-13F FLAT PATTERN**



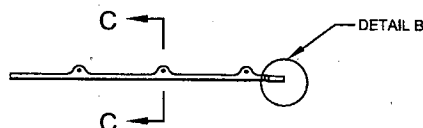
**D3564-13 BENDING DETAIL**  
(MAKE D3564-13 FROM D3564-13F)



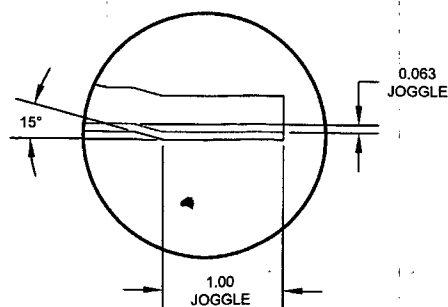
**DETAIL A**  
SCALE 1:1



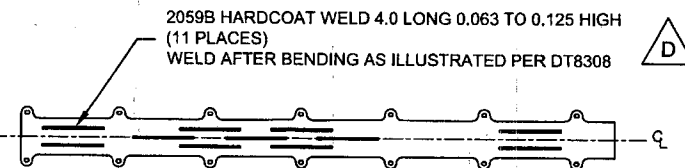
**D3564-15F FLAT PATTERN**



**D3564-15 BENDING DETAIL**  
(MAKE D3564-15 FROM D3564-15F)

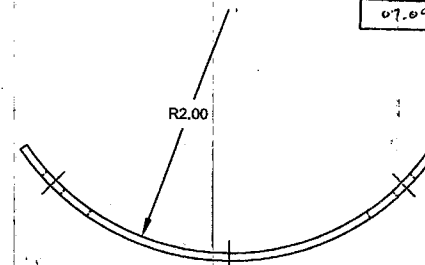


**DETAIL B**  
SCALE 1:1



**DETAIL D**  
(D3564-15/3-9/11 WELDING DETAIL)

**RELEASED**  
07.09.04



**SECTION C-C**  
SCALE 1:1

DESIGN	PH	<b>DART AEROSPACE LTD</b>	
DRAWN	CB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. D
MFG. APPR.	PH	D3564	SHEET 3 OF 3
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8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries